

Poll Creator

Poll Creator

Build a full-stack polling/voting application.

Overview

| Attribute | Value |
|-------------------|-------------|
| Level | Intern |
| Stack | Fullstack |
| Time Limit | 4-5 hours |
| Difficulty | Easy-Medium |

Problem Statement

Create a poll application where users can create polls, share them, and collect votes. Build both the API and React frontend.

Requirements

Backend Features

- Create poll with multiple options
- Get poll details
- Submit vote
- Get poll results
- Prevent duplicate votes (by session/IP)
- Close poll

Frontend Features

- Create poll form
 - Poll voting interface
 - Live results display
 - Share poll link
 - Results visualization
-

API Specification

Create Poll

```
POST /api/polls
```

Request:

```
{  
  "question": "What's your favorite programming language?",  
  "options": ["JavaScript", "Python", "Go", "Rust"],  
  "allowMultiple": false,  
  "expiresAt": "2025-12-18T00:00:00Z"  
}
```

Response (201 Created):

```
{  
  "id": "poll_abc123",  
  "question": "What's your favorite programming language?",  
  "options": [  
    { "id": "opt_1", "text": "JavaScript", "votes": 0 },  
    { "id": "opt_2", "text": "Python", "votes": 0 },  
    { "id": "opt_3", "text": "Go", "votes": 0 },  
    { "id": "opt_4", "text": "Rust", "votes": 0 }  
],  
  "totalVotes": 0,
```

```
"createdAt": "2025-12-11T10:30:00Z",
"expiresAt": "2025-12-18T00:00:00Z",
"shareUrl": "/poll/poll_abc123"
}
```

Get Poll

```
GET /api/polls/:id
```

Submit Vote

```
POST /api/polls/:id/vote
```

Request:

```
{
  "optionId": "opt_2"
}
```

Response:

```
{
  "success": true,
  "poll": {
    "id": "poll_abc123",
    "question": "What's your favorite programming language?",
    "options": [
      { "id": "opt_1", "text": "JavaScript", "votes": 15, "percentage": 30 },
      { "id": "opt_2", "text": "Python", "votes": 20, "percentage": 40 },
      { "id": "opt_3", "text": "Go", "votes": 10, "percentage": 20 },
      { "id": "opt_4", "text": "Rust", "votes": 5, "percentage": 10 }
    ],
    "totalVotes": 50
  }
}
```

```
    }  
}
```

Close Poll

```
POST /api/polls/:id/close
```

Wireframe

Create Poll

The wireframe diagram illustrates the structure of a 'Create Poll' form. It features a main title 'Create a Poll' with a bar chart icon. Below it, a 'Question:' field contains the placeholder '[What's your favorite programming language?]'. An 'Options:' section lists four items: '1. [JavaScript]', '2. [Python]', '3. [Go]', and '4. [Rust]', each followed by a checked checkbox icon. A '+ Add Option' button is located below these options. At the bottom of the form are two fields: a checkbox for 'Allow multiple selections' and a date input field for 'Expires: [2025-12-18] (optional)'. The final element is a large '[Create Poll]' button at the bottom center.

```
graph TD; A[Create a Poll] --- B[Question: [What's your favorite programming language? ]]; B --- C[Options:]; C --- D["1. [JavaScript] [X]"]; C --- E["2. [Python] [X]"]; C --- F["3. [Go] [X]"]; C --- G["4. [Rust] [X]"]; C --- H["+ Add Option"]; C --- I["Allow multiple selections"]; C --- J["Expires: [2025-12-18] (optional)"]; C --- K["Create Poll"];
```

Vote on Poll

What's your favorite programming language?

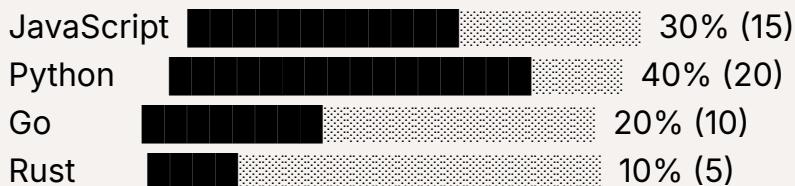
- JavaScript
- Python
- Go
- Rust

[Submit Vote]

Results

What's your favorite programming language?

50 total votes



Share: [<<http://localhost:3000/poll/abc123>>] [Copy]

Getting Started

Backend

```
mkdir poll-creator && cd poll-creator
mkdir backend && cd backend
npm init -y
npm install express cors
```

Frontend

```
cd ..
npm create vite@latest frontend -- --template react
cd frontend
npm install axios react-router-dom
```

Data Model

```
// Poll
{
  id: "poll_abc123",
  question: "What's your favorite programming language?",
  options: [
    { id: "opt_1", text: "JavaScript", votes: 15 },
    { id: "opt_2", text: "Python", votes: 20 }
  ],
  allowMultiple: false,
  totalVotes: 35,
  voters: ["session_xyz", "ip_123"], // for duplicate prevention
  status: "active", // active, closed
  createdAt: Date,
  expiresAt: Date
}
```

Evaluation Rubric

| Criteria | Weight | Excellent (5) | Good (4) | Acceptable (3) |
|---------------------|--------|----------------------|--------------|----------------|
| Backend API | 30% | Full API + dup check | Basic voting | Create only |
| Frontend UI | 30% | Complete + results | Basic voting | Form only |
| Integration | 20% | Smooth, shareable | Works | Basic |
| Code Quality | 20% | Clean both sides | Organized | Works |

Bonus Points

- Real-time vote updates (WebSocket)
- Anonymous vs authenticated voting
- Poll templates
- Embed code for external sites

Do not share this problem publicly.